tech.mit.edu

Volume 136, Number 3



WEATHER, p. 2

THU: 29° F | 10° F

Chance snow showers

FRI: 23° F | 16° F

Partly cloudy

SAT: 20°F | -2°F Windy and cold

Thursday, February 11, 2016



Building W92, where Information Systems and Technology's main offices are located.

FEATURE

A struggle within MIT's IT department over its future

By Drew Bent FEATURES EDITOR

The sweeping transformation that is currently underway at MIT's Information Systems and Technology office is one that is unprecedented in its scope and backlash from employees. Many students and faculty are familiar with IS&T, which maintains services ranging from email accounts to Athena clusters across campus — technologies that underlie everyone's time at MIT. Fewer people, however, are aware of the changes that have redefined the organization over the past year.

Led by IS&T's vice president, John Charles, the ambitious reorganization began in February 2015 and aims to spur innovation through agile software development practices adopted from industry. Charles emphasizes that this is not a typical reorganization, but rather a complete transformation of MIT's IT department.

Meanwhile, a number of current and former employees say the transformation has fallen short of improving the organization, and has instead created considerable turmoil in the work environment. This has resulted in roughly 20 percent of nearly

300 staff members leaving since February, instead of the average 8 or 9 percent annual turnover.

The reorganization stands out in several ways. Many longtime employees have resigned — by the estimate of a former employee, Laura Baldwin '89, more than 700 years of experience have been lost from people parting ways. A number of those employees have been MIT alumni.

The changes within IS&T are guided by a long-term strategic vision that was formed in 2014 and is expected to be fully realized by 2020. However, employ-

IS&T, Page 4

DSLx initiative to offer online mini-courses that teach 'soft skills'

DSL has called for students to submit videos, tutorials, or infographics to site

By Vivian Zhong

STAFF WRITER

The Division of Student Life (DSL) is in the process of launching its DSLx Life Learning initiative, which aims to teach MIT students "soft skills," according to the website.

The Life Learning initiative aims to teach MIT students skills such as communication, leadership, and empathy, as a complement to MIT's intense focus on technical skills, beginning with a "Teach It Yourself" (TIY) contest for MIT students that will run through February. The goal of DSLx is to provide a central hub of life-education resources to the MIT community, according to program director Sally Susnowitz. It will revolve around a website that collects and organizes pieces of microlearning — mini "how-to" tutorials in the form of short videos, listicles, and infographics

"Success in professional and personal life largely depends on 'soft skills," the website reads. "MIT students need to learn soft skills, which are arguably harder to master than technical subjects: how to inspire others, listen and communicate, think and plan ahead, understand their own values, manage themselves and their time, respect other people's views, and much more."

If the vision for DSLx seems broad, it is because the initiative is an open and experimental project. "We're building a framework, and then asking the MIT community members to populate the framework with content," said DSL Director of Communications Matthew Bauer.

The TIY contest calls on MIT students to create and submit microlearning material, and will generate content for a prototype website that the program staff is

DSLx, Page 3

Academic Council group will implement BSU recs

Community cooperation, accountability may be potential challenges, members say

By Sanjana Srivastava

CONTRIBUTING EDITOR

After the Black Students' Union (BSU) and Black Graduate Students' Association (BGSA) each published a set of recommendations addressing racial and mental health issues on Dec. 9, the Academic Council, a group of senior ad-

ministrators, formed a working group to address the points and plan their execution. They are now laying out a plan for implementing the recommendations.

Cooperation from all members of the community is a concern for the working group. Two of the recommendations ap-

BSU, Page 13

Reif announces education initiatives

President Reif announced four new education initiatives last Tuesday in response to the report from the Institute-wide Task Force on the Future of MIT Education.

The MIT Integrated Learning Initiative (MITili, pronounced "mightily") will integrate knowledge from fields such as neuroscience and economics

to understand how people learn best. This knowledge will be applied both on campus and online through MIT's digital education platforms. MITili is headed by Brain and Cognitive Sciences professor John Gabrieli.

On campus, a new team called the

Education, Page 3

IN SHORT

 $\begin{tabular}{ll} \textbf{Senior Lecturer in Physics Peter Dourmashkin} & did an AMA on discussion.mit. \\ edu yesterday. \\ \end{tabular}$

The Red Cross will be holding a blood drive in La Sala de Puerto Rico through Friday, Feb. 12. Appointments are available 1 p.m. to 6 p.m. each day, except Tuesday when they are available 8 a.m. to 1 p.m. Register at http://web.mit.edu/blood-drive

There is no class on Monday for Presidents Day. Enjoy the long weekend!

Send news and tips to news@tech.mit.edu.



LENNY MARTINEZ—THE TE

Students play with Gracie during the first Furry First Friday of the spring semester.

BUT I'M COURSE 6

Navigating xFair as a freshman. **CAMPUS LIFE, p. 11**

PORTRAITS OF RESILIENCE

A student's story of returning to MIT after trauma. **CAMPUS LIFE, p. 12**

MACK AVENUE SUPERBAND

A star-studded ensemble. ARTS, p. 9



LESSONS IN TFP

A grad student reflects on confessions about loneliness, life direction, and self-worth.

CAMPUS LIFE, p. 10

BOSOMS, ZOM-BIES, EXPLOSIONS

Read our 3-star review of *Pride and Prejudice* and *Zombies*.

ARTS, p. 8

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2 THE TECH THURSDAY, FEBRUARY 11, 2016

WEATHER

Bitter cold in store for weekend

By Vince Agard METEOROLOGIST

An Arctic air mass will bring this winter's coldest temperatures to date to the Boston area this weekend. A robust upper-level low pressure system will slide from northern Canada into New England beginning on Saturday, bringing with it an especially cold polar air mass. At the same time, our region will find itself sandwiched between an offshore surface low pressure system and a strong high pressure system located over the Ohio Valley. The result will be a two-day period of strong northerly winds, which will serve both to import frigid air from Canada, and to decrease wind chills to

potentially dangerous levels.

Sunday will be an especially cold day, with temperatures at or below 0°F (-18°C) in the morning, and struggling to break the 10°F (-12°C) mark in the afternoon. In Boston, both the record low temperature (-3°F) and lowest recorded high temperature

(14°F) for Valentine's day will be in danger of being broken. There hasn't been a day with a high temperature at or below 10°F in Boston since January 15, 2004. Furthermore, gusty winds could cause wind chills to dip below -20°F (-29°C). Such low wind chills mean that people who venture outdoors without taking proper precautions will be in danger of frostbite and hypothermia.

Extended Forecast

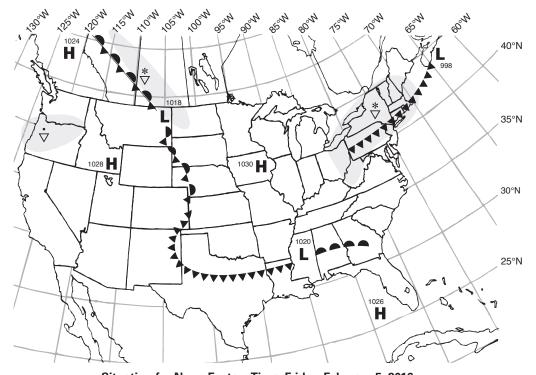
Today: Mostly cloudy and windy with a chance of light snow. High 29°F (-2°C). Winds W 15-20 mph.

Tonight: Partly cloudy and windy. Low 10°F (-12°C). Winds NW 15-20 mph.

Tomorrow: Afternoon cloudiness. High 23°F (-5°C). Winds SW 10

Saturday: Windy with a chance of flurries. High 20°F (-7°C).

Sunday: Breezy and cold. High 10°F (-12°C).



Situation for Noon Eastern Time, Friday, February 5, 2016

| eather Systems | Weather Fronts | Precipita | ation Sy | ymbols | Othe | er Symbols |
|----------------|-------------------|-----------|----------|----------------|----------|-----------------------------|
| _ | | | Snow | Rain | | Fog |
| High Pressure | Trough Warm Front | Showers | * | $\dot{\nabla}$ | ス | Thunderstorn |
| Low Pressure | | Light | * | • | ∞ | Haze |
| 2 | Cold Front | Moderate | ** | •• | Com | piled by MIT |
| 3 Hurricane | Stationary Front | Heavy | ** | •• | | orology Staff d The Tech |

James R. Killian, Jr., Faculty Achievement Award Lecture

Unlocking the SECRETS of CANCER



Tyler Jacks

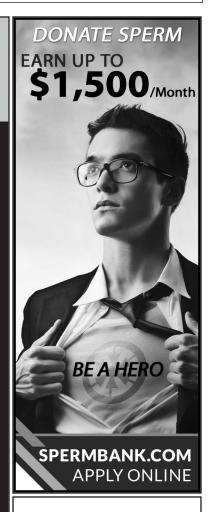
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Director, David H. Koch Institute for Integrative Cancer Research

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Thursday, February 11, 2016

The Tech 3

DSL launched a competition to find student-made videos

The site may be of use to students studying abroad

DSLx, from Page 1

currently developing. Examples of content that DSL is seeking range from general ("meeting new people") to targeted ("writing effective emails to MIT professors").

DSLx is "intended to complement campus resources with the added flexibility of being available whenever and wherever MIT students want to learn," Susnowitz said to *The Tech*. Her vision is for DSLx to eventually become an MIT-wide initiative, with input from the entire MIT community of students, alumni, and faculty.

Susnowitz has worked on bringing DSLx to fruition ever since she joined the DSL at the end of 2014. The goals and microlearning topics sought by the initiative, she added, have changed significantly since the project's conception, in part due to conversations with students in focus groups at the beginning of this academic year.

The Tech posed the question of how DSLx will prove to be significantly different from existing resources such as GRTs, academic advisors, and student discussion forums. Nemanja Marjanovic, a Graduate Community Fellow involved in DSLx, cited his own difficulties in accessing the resources he needed when he initially came to MIT.

"There were so many resources," he said, "but they were all scattered, and getting to them could be quite annoying, to be honest." He hopes that the new initiative will provide a more comprehensive guide for students to find the advice and answers they're seeking. "The envi-

sioned content on DSLx Life Learning," Susnowitz added, "will help us reach all students, including those who prefer to learn at their own pace."

Asked what made her feel that the DSLx initiative was so vital, Susnowitz cited her previous experiences as Director of the Public Service Center. In that role, she communicated with "thousands of students," including many who were studying abroad.

"What created a real interest in me," she said, was hearing students, both on campus and abroad, ask for resources in helping them handle a wide range of situations and "wishing that we had materials we could direct them to." She believes that a more effective and immediate way of accessing student resources has become increasingly pertinent as more and more students pursue international experiences.

The DSLx team is "planning on this [initiative] being a success," Bauer said, and is confident in their ability to "make adjustments as [they] go along." Susnowitz justified this belief by citing the abundance of precedence in professional companies, where, she said, videos and other microlearning tools are "commonly used to improve their staff."

She has not, however, found any precedence for this forum of life learning resource distribution in any universities, possibly making DSLx the first of its kind. In developing the initiative, Susnowitz said that the team took inspiration from the success of MITx, and has worked extensively with the Office of Digital Learning.

Mass publicity for DSLx and TIY among the MIT community has been fairly low; Susnowitz attributed this to the team's decision to wait to publicize until after a "critical mass" of material has been received for the website.

Bauer noted the difficulty of describing exactly what they're looking for from the community, and that the TIY contest is also an experiment on "how to approach the community." At the current stage of the project, Bauer believes that it would be more effective to build a "base of student contacts and personal networks" than to send out daily, undirected emails to advertise the contest and the initiative.

The DSLx team currently comprises a mix of administrators from various departments, as well as a few students. In the future, Susnowitz hopes to involve members from a wide variety of MIT organizations, such as the UA, Panhel, and the Alumni Association.

The DSLx initiative is largely funded by alumni donors, with the most prominent donation coming from Burt and Michele Kaliski, who have donated to MIT's public service in that past with the hope of "augmenting learning in a technological environment that connects people across distances, borders, and geographies," according to their DSLx profile.

Asked about how the team will gauge the success of DSLx, Bauer replied that "it's too early for benchmarks," adding that "as long as people are engaged with it ... we can know that it's fulfilling what we hope it will be."

Education, from Page 1

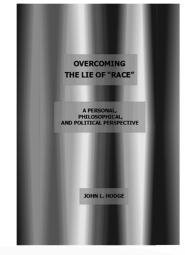
MITx Digital Learning Lab has been formed to "collaborate with interested faculty to build digital content in the curriculum." The team involves 16 MIT lecturers and postdoctoral researchers who are experts in digital learning in their fields.

Another initiative works with the 100+ current and developing MIT programs focusing on pre-K through grade 12 learning in STEM. The new MIT pK-12 Action Group will help these programs understand and improve learning.

The Digital Learning Solutions team has been created to provide online training in cutting-edge digital technology to "corporations, executives and professionals." Big Data X is an existing course that has over 10,000 students, and this team will develop more courses.

In order to organize the efforts, Dean of Digital Learning Sanjay Sarma has been made Vice President for Open Learning.

-Sanjana Srivastava



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FEATURE

IS&T's overhaul prompts resignations

Changes began February of last year and will continue until 2020

IS&T, from Page 1

ees say that the vision is not clear and that the demotions of managers and other structural changes have left them perplexed and uncertain about the future. The shift to industry practices has also upset some staff who worry IS&T is leaving behind its roots in MIT culture.

It's been a year since the changes were first introduced, yet they remain a contentious issue between upper-level management and many staff members. Since mid-November, at least five people have resigned from IS&T, Baldwin told The Tech.

Six current and former employees described their experiences with the transformation for this article, but several of them requested to remain anonymous to avoid backlash from IS&T or future employers.

Staff said that the wave of departures, combined with distrust in managers, has caused morale to plummet within IS&T.

"The problem," Baldwin said, "[is] that the organization is kind of being gutted and demoralized."

A former employee speaks up

Laura Baldwin had spent more than half of her life at IS&T. After graduating from MIT in 1989, she volunteered for eight years while in graduate school at Tufts and then spent a subsequent 17 years working full-time. Her most recent position had been at the help desk in the support department.

In that time, Baldwin saw the organization change a number of times. In 1995, it switched from six departments to five new teams that worked under the motto "great systems fast." The year 2004 saw it expand from Information Systems into IS&T as it merged with another organization, Financial Systems Services. In 2005, 2006, and 2010, the organization underwent further expansions and changes.

Baldwin spent more than half her life at IS&T.

Baldwin enjoyed her job of interfacing with students and faculty on campus and working to resolve their IT problems. Her managers appreciated her work as well; Baldwin said she had always received good annual performance reviews with no serious complaints.

into a meeting last October with two superiors and a Human Resources staff member, the mood couldn't have been more different. Her managers had several concerns with her recent behavior responding to specific help requests by MIT professors and employees. These included what they called "unprofessional communications" with a professor, and in particular the casual tone she had used in her online correspondences. Baldwin maintains she had tried her best to solve the professor's technical problem involving email servers, and had used similar language to what she had used previously. For her managers, though, the response she had given the professor over email had been unprofessional.

Charles, who was interviewed over email for this story, said he "cannot comment on individual decisions and personnel matters," other than to say that all personnel matters were "handled in accordance with Institute HR policies."

In the months before the meeting with her superiors, Baldwin already had doubts about her job. "I had not necessarily enjoyed my job for a while, but I was really good at it, and I liked doing it, and I liked helping people," she said. "So I was like, I'll keep my head down and stick it out, and eventually things will get better, since how could they not?"

IS&T is moving toward an agile and iterative approach.

Sensing that her managers were about to transform her role into a developer position, which would take time away from doing the support work she enjoyed, Baldwin decided it was time: only three days after her meeting, she resigned.

In a dramatic display, Baldwin met with one of her managers and ended with the line, "In the words of my people ... offer me money ... power too, promise me that. Offer me anything I want ... I want my managers back, you son of a bitch."

"I will always be grateful to my grandboss for allowing me to use my chosen exit line," she wrote later on her LiveJournal blog.

Baldwin's experiences are not unique, and she is worried about her former colleagues. "The casualty rate is still going up, and I feel like I know very few people [at IS&T] who are not either looking for jobs or wishing that they had time to look for jobs, and it's just going to get worse," she said.

The vision for an agile

In 2012, shortly after Israel Ruiz was appointed MIT's executive vice president and treasurer, he applied the tried and tested concept of external visiting committees — designed to provide universities' academic departments with outside feedback every few years — to the IS&T office he was now in charge of. The result was the 2012 IS&T Advisory Council

That Council's report, along with an older 2009 working group report, formed the foundations for John Charles's plan to revamp and modernize IS&T's services. After being appointed to his position at the end of 2013, Charles drew upon these reports and began a listening tour of his own to meet with groups ranging from IS&T staff and a student IS&T advisory board, to IT governance and advisory committees.

By the end of 2014, Charles had received the necessary approvals for the 2020 Vision for IT@MIT plan that he had helped develop. The plan concerned all information systems at MIT, but also focused largely on IS&T.

It was in February 2015 that letters were delivered to all IS&T staff members to inform them about the changes. "Everyone will experience some type of change," some of the letters read. "Individuals may have a new manager, have some modification of responsibilities, and/or need to learn new technologies and gain additional skills."

One of the primary principles guiding Charles is that IS&T must improve the efficiency with which it develops software to meet the growing needs of the university — something that most of the people interviewed for this story agreed with.

Before 2015, IS&T relied on a development methodology called the "waterfall model" in which the various stages of building software — such as design, coding, and testing — happen sequentially.

Under the 2020 vision, IS&T is moving toward an agile and iterative approach. The exact flavor of agile methodology they've adopted is one called Scrum. The model is used in much of the software industry, and is generally considered more efficient than the waterfall model. The time between conception and deployment can be dramatically decreased.

IS&T is attempting to apply the agile approach to the entire organization. "Agile organizations," Charles wrote in a February email, "need empowered leadership at the individual and team levels — that means less management and more fluidity."

He acknowledged that the "ca-

"MIT is not a one-size-fits-all organization."

reer progressions" for individuals would change and that several managers would transition to "lateral/same-level individual contributor leadership roles."

In an email interview with The Tech, Charles said there was a need for "transforming, expanding, and refreshing skillsets" of IS&T employees.

While MIT's IT department has seen its fair share of reorganizations in its 33 years of existence, this one may be unique in the number of people that have left as a result

During IS&T's last reorganization in 2010, 19 IS&T staff were laid off. While the number of "involuntary separations" during this restructuring was similar — 17 between February and August according to an IS&T document — many others also chose to resign or take an early retirement.

be very little agreement. While most of those interviewed agreed with the general high-level principles guiding the changes, they contested the scope and details of their implementation.

Applying industry methodologies like the agile Scrum framework to the entire organization of IS&T is overkill, several of those interviewed said.

Another former employee said that he decided to leave IS&T when he realized "the organization would never truly be able to adopt agile practices such as Scrum"

The Scrum methodology is about avoiding micromanagement of employees, he said, which is "completely at odds with the preferences and personalities of much of IS&T's current leadership."

Several people said that since Charles believes IS&T is undergoing a transformation that not many other universities have attempted, he looks to the corporate world — insurance, financial, and technology organizations — for examples of similar changes. Charles cites Google, Apple, Amazon, and Netflix as inspiration and for having similar "makerbased" cultures to MIT.

Not everyone feels that industry and MIT cultures are comparable.

"MIT is not a one-size-fitsall organization," Teddy Thomas said, who worked at IS&T for 1.5 years before resigning this June 15. "Just because something works somewhere else doesn't mean it will work at MIT."

Baldwin described the new approach as a "we're-a-company' mindset."

"There has been a lot of lip service paid to the idea that we're partners with the MIT departments and communities in providing service," she said, "but if we're behaving in ways that are much more corporate, it's unclear how true that is."

She went on to add, more generally, that she thinks the changes "bring you more to the average of what everyone else does," potentially destroying the "unique culture" that existed in MIT's IT department before.

Baldwin thinks that even if some of the industry standards work for the software development aspects of IS&T, the agile framework and the measurable metrics that were introduced alongside it are not appropriate for the support aspects of IS&T.

In the call center, she said, staff used to take a support call

IS&T has developed "a culture of fear, secrecy, double-speak, and a clear lack of respect from senior leadership, Thomas said.

According to Charles in a November meeting, 18.6 percent of IS&T staff members had left IS&T since February, in comparison to 8 or 9 percent on an average year. More staff members have left since that number was announced.

Disputed methodologies

Despite the fact that Charles and other managers have repeatedly told staff members that the transformation would require their full support, there seems to and have as much time as needed to write up the support "ticket" afterwards. After the reorganization, though, they were required to finish the ticket and take another call after two minutes. While that meant the call center metrics may have looked better, Baldwin thinks it came with the cost of lower quality tickets as staff members were pressured to take more calls.

IS&T may also be shifting

IS&T, Page 5

CORRECTIONS

An article published in *The Tech* last week miscontextualized a quote by Geoffrey Supran, who was quoted as saying that the Fossil Free MIT sit-in may occasionally disband if only a few members are present. In fact, he said that, in one specific instance, the sit-in disbanded when only a few members were present, no administrators were in the offices, and the group had a meeting.

FEATURE

Reorganization intended to spur innovation

Vice President John Charles has adopted industry practices such as agile development

IS&T, from Page 4

away from certain projects that hold value to MIT. One example is the development of future versions of Athena, MIT's academic computing environment that has been around since 1983.

Jonathan Reed '02 was the sole IS&T employee in charge of Athena development, before resigning last July. Since then, "no staff members have been assigned to work on Athena development," Reed said. There are still part-time contributors, but Reed noted that they "can't provide the same level of support that a full-time staff member can."

Charles acknowledged that future development of Athena is up in the air. Due to its shift "from on premise datacenters to off premise cloud" environments, IS&T is preparing to close down its W91 datacenter in 2017 and is simultaneously rethinking the Athena clusters on campus.

Two employees remarked on a trend of staff members who were MIT alumni either getting pushed out or choosing to leave IS&T. One current employee, who is not an MIT alumnus, hypothesized that graduates are more likely to identify with MIT students and faculty, and thus more willing to help out some "quirky" person with their idiosyncratic projects — something that is harder to do, and possibly even looked down upon, in post-reorganization IS&T.

Reed added that the Athena system includes "a vast number of under-utilized complex features that are in use only by a small, but highly vocal, subset of the MIT community," and that maintaining them would require "active support from senior leadership."

Charles asserts that the transformation is about "enabling MIT's culture of innovation" and serving the community in a "hopefully more effective and efficient way."

However, the belief among those resigning is that the managers are too focused on metrics to notice if they're actually assisting the people who need it. A former employee posed the question, "Have these people lost touch with [those] they're helping?"

Uncertainty

"This was the first time in 13 years (and 4 previous IS&T re-orgs) that I had seen managers and directors demoted for no apparent reason," Reed wrote in an email. "This was also the first time I had seen

people re-assigned away from their existing positions and then those same positions re-posted on the MIT Jobs website within days."

Many managers were demoted from their supervisor roles, likely as part of the changes to make IS&T a flatter organization. However, in several cases, new managers were put in place as soon as their predecessors left.

In data management, systems engineering, and customer support, where most of the resignations occurred, at least 15 project managers or team leaders left since the reorganization, according to orga-

"I think this is too little too late," Thomas said.

Baldwin said that the changes were "probably a good sign," although her work in support would not have been affected.

The switch to bimodal IT is supposed to help people know "how to select the proper tools and methodologies for the job," Charles said. This is a "critical first step in the transformation" toward a completely agile workplace that is made up of "agile mindsets, agile behaviors, agile practices, and agile processes."

IS&T has tried to improve morale in small ways, such as adding treadmills, soda machines, and free snacks across the offices.

 $nization\ charts\ from\ IS\&T's\ website.$

Charles acknowledged the "disruptive work" in the transformation, but said that the organizational changes are due to "consolidating teams around [their] new operating model."

IS&T has tried to make the details of the upcoming four years accessible through the public-facing Future of IT@MIT website (it.mit. edu) and a wiki with commonly asked questions and answers, such as, "Who made the decision regarding my title change?"

IS&T also reports on the latest version of the transformation (using version numbers like those used for software), which they announce at meetings or over emails, as well as publicly online.

In the latest version from November, "IS&T v1.5," Charles asked IS&T employees to step back from the Scrum model, instead providing them with the flexibility to choose whatever methodology they want to use, "whether it's Scrum, waterfall, Kanban, or storyboards." This process is known as bimodal IT, and is once again an idea adapted from industry.

The latest change seems like it would have resolved the concerns that staff held in 2015, but it has

For some skeptics, it has simply fueled the perception that upper management does not have a clear plan for the transformation.

Another former employee predicted that "groups will go back to doing things the same way they have for the last 20 years."

"Gutted and demoralized"

In order to be successful, the transformation will require everyone to buy into new philosophies, as Charles has emphasized in meetings. However, this has led to an environment where people are hesitant to express dissenting views, a current employee said.

Baldwin agreed. "When it's presented as a victory," she said, "then nobody feels like they can say, 'No, actually, this is inconvenient. This makes it harder to get our jobs done."

These attitudes are indicative of a larger morale crisis currently taking place in parts of IS&T: what Baldwin referred to as feeling "gutted and demoralized."

IS&T has developed "a culture of fear, secrecy, double-speak, and a clear lack of respect from IS&T senior leadership," Thomas said.

Charles described this "stress" as originating from employees' "disrupted relationships," "new roles within new teams," and their needing to adopt "new skills, new methodologies, new processes, and ... new mindsets." He agreed these difficulties are challenging, but maintained that they are necessary for modernizing IS&T.

IS&T has noticeably tried to improve morale in small ways, such as adding treadmills, soda machines, and free snacks across the offices. Rather than appreciating such amenities, however, those interviewed took a cynical view and treated them as superficial attempts to boost morale.

Furthermore, despite the IS&T

reorganization principles being openly documented online, other parts of IS&T have seen a culture of secrecy develop around them.

Some staff in managerial roles allegedly signed non-disparagement agreements when resigning. These agreements can be found in many organizations, and they generally prevent former employees from taking actions that negatively affect the organization. As a result of these agreements, though, many staff were not available to be interviewed for this story.

Even those who were interviewed requested anonymity because they feared their identities being revealed would hurt them in their current jobs or in future jobs. Some former employees were concerned that their speaking out would lead to retaliation on current staff.

Beyond the IS&T bubble

The impact of the reorganization extends beyond just IS&T. Both Charles and discontented employees agree that the changes are affecting the greater MIT community.

Charles attributes the success of several new IS&T services used by the MIT community to the reorganization and its accelerated development cycle. One such platform is the newly released Developer Community Portal and its APIs that allow MIT developers to access various MIT data. "Two of our new APIs, Classrooms and Subjects, were built in response to student feedback," he said.

Former employees were concerned that their speaking out would lead to retaliation on current staff.

Charles also highlighted two other services that IS&T has introduced at MIT — Dropbox for Business and GitHub Enterprise. It should be noted that these services were announced in August and October of 2014, respectively, months before the reorganization began

Their development originated from a "series of proof-of-concept projects" that were launched during the planning stage of the transformation, Charles said. One current employee, however, said she didn't see "any connection between their rollout and the transformation."

Many current and former employees worried that the quality of support that IS&T is providing students and faculty has declined. Because of the considerable loss of institutional knowledge from people resigning, the organization isn't as well-equipped to manage several of its services, some said.

"To the extent that we [at IS&T] actually have a mandate to provide IT help and infrastructure and support to the MIT community," Baldwin said, "we're going to be screwing that up."

Since 1983, MIT's information systems have been a key part of the MIT experience. For example, one of the first things a student now does upon entering MIT is create a Kerberos account that will act as their online identity during their time at the university.

The turmoil within IS&T will likely settle down, but beyond the buzzwords like "agile" and "innovation," and beyond the managerial role changes, there is a more fundamental disagreement taking place.

It's an open question whether IS&T should be run based on the principles that guided it through the rich yet fragmented history of the past three decades, or based on the norms of industry that could lead to a more progressive yet uncertain future. While everyone agrees that IS&T can and should improve, a number of IS&T affiliates don't want to see the defining aspects of MIT's IT be thrown out with the transformation.

Interestingly, that concern was raised as far back as August 2012, when the IS&T Advisory Council released their report after assessing the state of IT. Two years before the transformation would even begin, members of academia and industry were anticipating the struggles associated with change at MIT.

"The MIT environment might also be characterized as one of autonomy and entrepreneurialism," the report read. "Over time, this culture has impacted core administrative processes and systems, which have become disparate and led to inefficiencies."

"It is now difficult to modernize systems and scale them to meet the needs and expectations of the community. This cultural challenge will need to be confronted in order to achieve the vision of simplified processes and systems."



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Taco Techdoku

THURSDAY, FEBRUARY 11, 2016

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| 36× | - | | 21+ | <u> </u> | 4 | 7- | - | 2 |

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–9. Follow the mathematical operations for each box.

63×

Salsa Sudoku

Solution, page 15

| 5 | | | | 9 | | | | 2 |
|--------|---|---|---|---|---|---|---|---|
| 5 6 | 8 | | | 7 | | | 3 | |
| | 7 | | 8 | _ | 2 | 6 | | |
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| | 2 | | | 5 | | | 1 | 6 |
| 7 | | | | 6 | | | | 4 |

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

5+

Tortilla Techdoku

Solution, page 15

120×

OFF THE TOP by Charles Slack

45 Yellow songbird

47 Debt reminder

56 Most reliable

60 Whodunit hint

62 Electrical line

63 Theater level

59 Historical periods

61 Locale of the Louvre

64 Mattress covering

46 Stand __ (take no cards)

58 Oscar actress Julianne

49 Teammate who rarely plays

ACROSS

- 1 Biblical song 6 Alan of M*A*S*H
- 10 Do the backstroke
- 14 Variety show 15 Place to do the backstroke
- 16 British bloke
- 17 Last Greek letter
- 18 Just hanging around
- 20 Miss America's understudy 22 Battleship designation
- 23 Bit of barbecue
- 24 Changed into
- 29 Lowest royal-flush card
- 30 "Spring forward" period:
- 33 Farewell in Hawaii
- 34 Male deer
- 36 Farewell in Florence
- 37 Ship's executive officer 40 Gross, to a tot
- 41 Gung-ho about
- 42 Prepared a filet
- 43 Pig's place 44 Flavor enhancer initials
- **DOWN**
- 1 University teacher, for short
- 2 Prefix for circle 3 State with confidence
- 4 Drags around
- 5 Food avoided by vegans 6 Very high grade
- 7 Lake birds
- 8 Tire out completely
- 9 Clark Kent, to Superman
- 10 Cancel, as a space mission 49 Split apart, as paper

- 11 Use an eggbeater on 12 007 creator Fleming 13 Gasoline consumption stat. 19 Ireland nickname 21 Regret 24 Underlying principle 25 Choose by ballot 26 Overly confident 27 Sailor's greeting 28 Guy
- 29 Crunchy Mexican food 30 Prince William's mom 31 More rational 32 "Hot" winter drink
- 34 Perform a ballad 35 Explosive initials
- 36 "Let's get moving!" 38 Part of DC
- 39 Wharton deg. 44 Hotel housekeeper
- 45 Mongrel
- 46 Crescent or new moon 47 Discussion point 48 Aquatic mammal
- 50 Sandwich shop 51 Little rascals
 - 54 Water beside Buffalo 55 Take five
 - 52 Lexicographer Webster 53 1990s vice president
- 56 Stitch up

57 Prefix for cycle

UNDER WRAPS by Gail Grabowski

ACROSS

- 1 Pear variety
- 5 School semester 9 Clean vigorously
- 14 Opera solo 15 __ vera (skin-cream
- ingredient)
- 16 "Am not!" reply 17 Munich mister
- 18 Scottish caps
- 19 Sing in the Alps 20 Computer log-in entry
- 23 Roll-call response
- 24 Mornings: Abbr.
- 25 Low-power coffees
- 28 Cover with concrete
- 30 Granola grain
- 33 Remove pencil marks
- 34 Clock reading
- 35 Prefix meaning "against"
- 36 Hush-hush spy activity
- 39 Poems of praise
- 40 Small songbird 41 Pebble or boulder
- 42 "Absolutely!"

FUNFUNFUNFUNFUNFUL

- 45 Bullring cheer
 - 47 Pirate's buried stash 54 "All kidding __ . . . "
 - 55 Lubricates 56 Take a risk

 - 60 Wickedness
 - 62 Child not quite 20 63 Appear to be

- 1 Scrooge's exclamation

- action films
- 6 Make happy 7 Frolic

- 58 Moral principle 59 Capital of Norway

43 Professionals' charges

44 Polishes, as shoes

61 Fortune tellers

- **DOWN**
- 2 Metals in rocks
- 3 Kingly address 4 High-speed pursuits in
- 5 Spuds

- 8 Flat-topped hill 9 Bully's reply 10 Cornfield birds
- 46 Borscht vegetable 11 Decorate again
 - 12 Computer buyer
 - 13 Fearless 21 Direct attention (to)
 - 22 Thrifty person 25 Hunter's wooden duck
 - 26 Wear away
 - 27 Bats' underground homes 28 Plumbing tubes
 - 29 End of a prayer 30 Pungent burger topping
 - 31 Make amends (for) 32 Fork prongs 34 Ripped
 - 35 States of mind 37 11- or 12-year-old
 - 38 Fireplace residues 43 Groups of warships
 - 44 Winter or summer 45 More unusual
- 47 Berets and bonnets
- 48 "That makes sense"

- 51 Stand up
 - 52 Rant and __
 - 53 One of the Great Lakes 57 Shade tree

THAT WAY, YOU CAN SEE

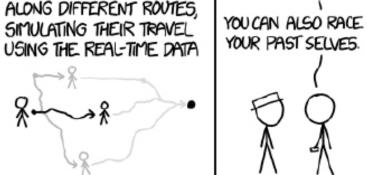
TO BE FASTER IN PRACTICE.

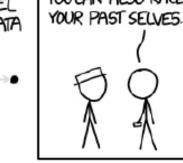
46 Charming southern 49 Eat a formal meal 50 Car horn sound

[1580] Travel Ghost INSTEAD OF JUST PLANNING LOTS OF APPS LET YOU MY NEW APP LETS YOU SEND | WHICH ROUTE TURNED OUT

SIMULATING THEIR TRAVEL USING THE REAL-TIME DATA

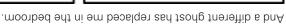
"GHOST" VERSIONS OF YOU

















THEY TRY TO PREDICT WHICH ROUTE WILL BE FASTER, BUT AREN'T ALWAYS RIGHT.

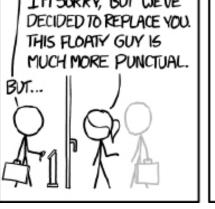
PLAN YOUR TRIPS USING

REAL-TIME BUS, TRAIN,

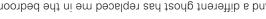
and traffic data.

500N.

HEY, MY KEY WON'T WORK. I'M SORRY, BUT WE'VE







30×



8 THE TECH

Ingrid Bergman: In Her Own Words

A film composed of memories

By Lenny Martinez

Ingrid Bergman was a Swedish actress born on August 29, 1915. She lost her mother at the age of three and her father at the age of twelve. Throughout her acting career she won three Oscars, four Golden Globes, and two Emmys, among other awards. She married a total of three times and had four children. She starred in films like Casablanca, Notorious, and Stromboli. And her eyes. Her eyes were a very beautiful shade

This is the kind of information you would find if you watched a movie about

Not Rated

Ingrid Bergman: In Her Own Words

Directed by Stig Björkman

Starring Ingrid Bergman

Opens Friday, Feb. 12 at the **Kendall Square Cinema**

Ingrid Bergman. And yes, you can find this information in *Ingrid Bergman: In Her Own* Words, a semi-autobiographical film. But it's not presented in the way you would normally expect. From the start, In Her Own Words almost exclusively features pieces from Ms. Bergman's own life. The film features photographs, clips of film her father took of her as a child, clips of films she took over the years, and most interestingly, diary entries and letters she wrote to the people closest to her. It is amazing to consider that Ms. Bergman, who emigrated several times in her life, would keep all her correspondences, her diaries, even her passport from when she was a child! But she did. From Sweden, to America, to Italy, to France, to

The film opens with a diary entry from 1928 — Ms. Bergman's father is ill and her diary entry is a plea to God to make her dad better. From there, the film takes off and progresses through Ms. Bergman's episodic life. The letters shared show the whole range of emotion as Ms. Bergman grew as an actress: from the elation of being able to go to Hollywood, to the longing for her first daughter, Pia, while she worked, to the passion she felt for her various lovers, and even the joy and then slight fear of first becoming a successful actress and later an aging one.

Stig Björkman, the director, does an in-

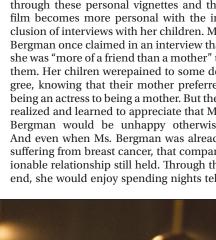
credible job of sharing Ms. Bergman's life through these personal vignettes and this film becomes more personal with the inclusion of interviews with her children. Ms. Bergman once claimed in an interview that she was "more of a friend than a mother" to them. Her chilren werepained to some degree, knowing that their mother preferred being an actress to being a mother. But they realized and learned to appreciate that Ms. Bergman would be unhappy otherwise. And even when Ms. Bergman was already suffering from breast cancer, that companionable relationship still held. Through the end, she would enjoy spending nights tell-

ing stories with her eldest son Roberto.

Of the film's aesthetics, there is very little to add. Except for the interview segments, the content is comprised entirely of a collection of old film and photographs. As a photographer myself, I could sympathize with Ms. Bergman's desire to record and keep her memories, and I could find a certain beauty in that.

There is also beauty in watching Ms. Bergman age. The use of clips isn't fully chronological (in the beginning, there are clips from Ms. Bergman's second marriage). But in every clip and photo of her, her blue eyes have the same glimmer.







Mack Avenue Superband: jazz legends, educators

Famed vibraphonist Gary Burton teams with virtuoso bassist Christian McBride



The Mack Avenue Superband, an energetic and star-studded six-piece jazz ensemble, performed at the Berklee Performance Center last Thursday

For a fan of jazz, the collection of talent onstage was extraordinary. The group is anchored by the living legend Gary Burton, who has been innovating on the vibraphone since the 1960s and has 15 Grammy nominations to his name. The backbone of the band is the Christian McBride Trio, headed by four-time Grammy winning virtuoso Christian McBride

Most of the pieces were composed by members of the band and are featured on their new album, Live from the Detroit Iazz Festival 2015. Since 2013, the Superband has released an album of their great performances at the Detroit Jazz Festival every year.

The Mack Avenue Superband presented by the Celebrity Series of Boston at the Berklee Performance Center

The first piece, "Preach Hank!," a mediumtempo swing that featured every instrument, was pretty tidy. Trumpeter Sean Jones stole the show with a grooving solo that hit screeching high notes with ease.

The next piece, my favorite, was "Decisive Steps," an original composition by saxophonist Tia Fuller. She meant the piece as a message to her students, encouraging them to step forward "with faith and not fear." It starts

out hesitantly with changing time signatures, but settles on a quick tempo for the solos. Although Fuller's tone throughout the evening was a bit too strident for my taste, she was stellar on her own piece, pressing forward with urgency and edginess.

The improvisation was a lot more raw than you might hear on the album — in front of a live audience, the performers had more liberty to experiment with tonality and dissonance.

Perhaps the most impressive display of the night was from pianist Christian Sands. His accompaniment throughout the evening was rock-solid, but his solos really showed off his vast knowledge of jazz. He can string together handfuls of tough, innovative chords,

Mack Avenue Superband Berklee Performance Center Thursday, Feb. 4, 2016

and his improvisation has a lot of ingenuity. He has a unique style, both surprising and

Many of these master musicians are Berklee educators. Jones is head of the brass department there, and Fuller is a professor in the ensembles department, Burton, a former professor, was also executive vice presi-



Pride and Prejudice and Zombies: a Feminist Manifesto

Zombie version of Jane Austen's classic is unexpectedly enjoyable

By Alexandra Sourakov

Lily James (center) and Bella Heathcote (left) in Screen Gems' Pride and Prejudice and Zombies

I'll admit it: going in, I was skeptical and ready to snub Pride and Prejudice and Zombies. The very concept of Jane Austen's masterpiece set during a zombie apocalypse made me want to take up arms against this monstrosity, but as it turned out, the novel, much like its heroine Elizabeth Bennett. didn't really need defending.

For those of you who read or watched Pride and Prejudice (the original) against your will and found the going a bit slow, this was made for you. Pride and Prejudice and Zombies hijacks the novel's romantic plot, best lines, and characters (some of whom have to be flattened quite a bit to be squeezed into the movie) and adapts them in a way guaranteed to entertain a hyperactive

We are introduced to an England besieged by droves of undead. The Bennett sisters, who have been raised by their father (Charles Dance) as warriors "meant for battle, not cooking," are fighting for the survival of the human race, leaving the pianoforte by only problem is that this theme and many the wayside. No longer are Elizabeth (Lily

James) and her sister Jane (Bella Heathcote) brushing each other's hair as they discuss the merits of marriage for love; they are practicing their punches, dressed in black Oriental robes. Their mother wants to marry them off and is hopeful when the well-offFitzwilliam Darcy (Sam Riley), a broodingly handsome zombie hunter, and Charles Bingley (Doug-

las Booth) move into the neighborhood. Pride and Prejudice and Zombies takes a cleverly written and carefully structured social commentary of Regency era England and turns it into an action movie replete with heaving bosoms, zombie orphans, and exploding bridges. There are scenes in which the novel's verbal sparring matches, like Darcy's initial proposal and Lizzie's exchange with Lady Catherine de Bourgh (Lena Headey), are transmuted into kicks and punches. the camera, no sarcastic undertones — and Some may find this to be a tawdry ruse, but it worked. The humor stemmed from the in a way, it highlights the force lurking in Jane contrast between their earnestness and their Austen's original dialogues. In 19th century backdrop. England, words were the only weapons one could wield in polite society, and the movie reminds one of the power behind words. The

other details are drowned out by the sheer

ed actors and it pays appropriate homage to its predecessors. Ladies may recall a certain scene involving a pond in the BBC adaptation (the theater broke out into cheers and whoops at this tribute). Matt Smith, whom many know from *Doctor Who*, plays a spectacularly slavish and awkward Mr. Collins, and many will recognize Mr. Bennett and Lady de Bourgh from Game of Thrones. The undead that were stalking across the countryside managed to be eerie, repulsive, and pitiful, all at once. The gore was not distasteful, though questionably within the confines of PG-13. What aided in the success of this production was the sincerity of the actors. The actors played it straight: no winking at

amount of action that is packed into the film.

The movie is filled to the brim with talent-

All in all, I was pleasantly surprised. The film has an overt theme of female empowerment that I approve of — Jane Austen on steroids. These feisty female warriors make a feminist proud. They are not merely surviving, but are charging off into battle to save their beaux from rampaging zombie hordes. This movie is not your typical mash up, and though not a cinematic chef d'oeuvre, it is more thoughtful than the title suggests. If you're skeptical, give it a shot. Even if you hate it, you can at least admire Sam Riley's dark eyes and husky voice, and some pretty

★★★☆☆

Pride and Prejudice and Zombies

Directed by Burr Steers

Starring Lily James, Sam Riley, Matt Smith, Jack Huston, Bella Heathcote

Now Playing



Lessons from Confessions

Debunking the myth that everyone else is happy and perfect

I started confessions mit edu after the suicide of a student whose death surprised everyone: a sociable, involved student who, I thought, must not have been talking to anyone about her deepest struggles or on the meta level. Loneliness, insecurity,

the same struggles in others. There is a deafening silence on certain issues. and Confessions shed some light on the kind of thoughts that proliferate in an emotional vacuum like

10/30/15: "I've been having this feeling lately that I'm so lonely compared to other people.

lonely' I've heard that said aloud so few times that each instance is distinct and vivid in my mind, and I'm always surprised at whom I hear it from. People whose extroversion I had personally envied were overwhelmed by feelings of isolation and envy at the happiness of others, an emotional impostor syndrome. Confessions opened up a

chorus of people exneed to express them.

9/30/15: "I hate research, despite being 'good' at it ... I feel like a worthless human being, a total failure at life ... I can't help but see that all the PhD students that I see share some of this trauma to some degree. It's something none of us talk about, but we could all see it in each other."

Many graduate student confessions are characterized by this sense of disillusionment. It's a difficult point in your life to realize that your life may not be moving in the direction you want it to, that in fact you yourself may be moving it in another direction, and have been doing so for years. We see the lives of people who have taken other paths, and many experience the painful epiphany that happiness is not a meritocracy, that we can do everything we've been told to do and still end up

11/6/15: "My parents are paying too much money for me to be here depressed. I try to mask it but I just feel so broken on

many people would kill to be at MIT and to have access to all the resources that I

Perhaps the most telling remarks are

the inside sometimes. I even feel bad for drop for just a second, and for someone to being depressed because I know that so say to me honestly 'I love you, and thank

> It's an act of courage to expose your vulnerabilities, to say that you're hurting, or that you need love and acceptance. And it's harder still to say it with a straight face,

You are capable and can overcome this."

pouring of support and empathy in response to almost every post. People expressed relief to see they were not alone, and to be able to reach out to someone like them. And the tone is always so encourag-

> supporting others in this way helpful even for myself. Seeing our struggles in others allows us to look at them more objectively; in comforting others who were being harsh on themselves, I realized how vicious and unforgiving I had been to myself and so unnecessarily. I had berated myself in a way I would never berate others, and I needed to stop. We all need to stop, and to help each other. Confession: went through a

very rough patch last year. A close hospitalized for being suicidal, and tension with some of my family members had reached a boiling point. I felt weak and incompetent for being so impaired by this

and for not knowing exactly what to do. And then my mom called me to tell me she was proud of me and that she knew I was struggling a lot but that it's natural, that it's okay. She told me, "You are not broken," and I dissolved into

This is exactly what I needed to hear and what so many people are clamoring to hear. You are not a machine, and you are not malfunctioning. You are not an aberration in an impeccable mass, and you can come and see for yourself that there are so, so many others like you, even though it may not be obvious at first glance. And they will tell you they exist, and support you, even though right now they might need to do it anonymously.

10/5/15: "If you can draw hope and strength from the journey of another, then know that I made it through the seemingly ever-present darkness you have fallen into and that I care deeply about you even though we have never met."

Renee Bell is a graduate student in the Department of Mathematics.



and uncertainty are far from uncommon in the human experience, but the root of many of our problems at MIT seems to be particularly difficult at MIT? I think the dehow we feel about them. Posts are full of guilt, of merciless self-judgment, words like "broken" and "failure," and the apparent conviction that it is a sin to falter. I real-

a bare face, without the veneer of irony or humor or sarcasm. Why does this seem

sire for validation breeds a heightened fear of being mocked or judged as weak, which makes it hard to be sincere. But liberated by anonymity, people have revealed that ized that I had often wondered what I was it's even harder to suppress these feelings.

Confessions opened up a chorus of people expressing their feelings, and expressing the need to express them.

without questioning what "wrong" even

12/6/15: "More than anything, I just want someone to tell me that this has been worth it. That this has been worth the extra the machismo bullshit I have to put up to

doing wrong, or what was wrong with me,
It's damaging: it amounts to suppressing

I truly hope that things turn around soon.

10/5/15: "Reading this felt like someone had gotten ahold of my journal from last year and published a page. I've had the exact same thoughts since coming here. suffering that I've been through. Liust want Hang in there. Please, I care about you and

I was completely floored by the out-

cure an opportunity from a ing and gentle. company of interest. Nevertheless, last Monday, like many MIT students. I went to xFair to speak with dozens of representatives looking for potential summer interns.

Garnering any interest from these companies would be unlikely, but I thought I'd go anyway. I knew it would probably be like all my other attempts (the rejection emails assuring I was a motivated worker, the online applications that never received a response). I knew that these things are geared toward upperclassmen. Regardless, I convinced myself that maybe there was a chance someone would want me enough to offer me something. Over IAP, I crafted my

THURSDAY, FEBRUARY 11, 2016

By Zachary Collins

summer has been a rough one. As a fresh-

man who wants to code but hasn't done a

ton of coding, it can be quite difficult to se-

The search for something to do over the

resumé, boasting about all the irrelevant things I accomplished in high school. The Sunday before, I went downstairs to

my dorm's Athena cluster and wasted the equivalent of three trees to prepare for the next day. I woke up early, put on some nice clothes, grabbed my collection of underwhelming resumes, and joined the massive

sea that flowed into the Z-Center.

When even being Course 6 doesn't save you

Everyone congregated in the front, so I went to the back. I thought that starting away from everyone else would give me a chance to differentiate myself. I proceeded to make my rounds, talking to each and

In search of an elusive freshman internship

ally only give internships to juniors and seniors," or some variation that meant I wasn't getting anywhere.

A lot of people may think that I wasted my time going. Obviously this fair wasn't meant for me. It's not like I've done enough

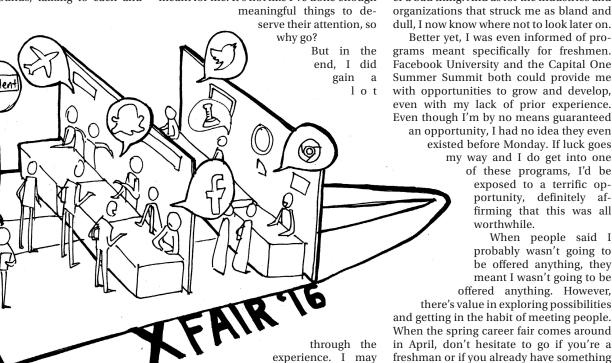


ILLUSTRATION BY JESSIE WANG

booklet prior to the event, I couldn't tell every company that would provide me a you anything about half of the companies chance to code. One by one, I asked more on that list. Aside from big names like Faceabout them, seeing if they had any open book and Google, I felt pretty uninformed spots for the summer. And almost every about the businesses there and their exact single one said the same thing: "We re-

By the end of the day, I had talked to data analysts, stock trading companies, robotics firms, and even a company responsible for accumulating sports statistics. I thought a lot of it was really cool, and free stuff is nev-

er a bad thing. And as for the industries and organizations that struck me as bland and dull, I now know where not to look later on. Better yet, I was even informed of programs meant specifically for freshmen. Facebook University and the Capital One Summer Summit both could provide me with opportunities to grow and develop,

Even though I'm by no means guaranteed an opportunity, I had no idea they even existed before Monday. If luck goes

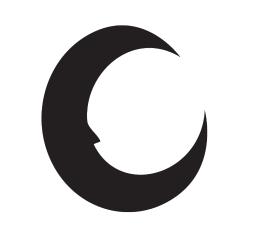
my way and I do get into one of these programs, I'd be exposed to a terrific opportunity, definitely affirming that this was all worthwhile.

When people said I probably wasn't going to be offered anything, they meant I wasn't going to be offered anything. However,

there's value in exploring possibilities and getting in the habit of meeting people. When the spring career fair comes around in April, don't hesitate to go if you're a freshman or if you already have something lined up for the summer.

Maybe you'll find a company you'll want to research down the road. Maybe you'll discover an emerging industry you didn't even know existed. Maybe you'll be like me and get rejected a hundred times. Either way, you'll never know unless you

Zachary Collins is a member of the Class



WHAT KEEPS YOU UP AT NIGHT?

still be unemployed over

the summer, but I have a much bet-

ter idea of what is out there and what I can

do down the road. When looking at the xFair

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PORTRAITS OF RESILIENCE

Taylor Shaw

Editor's Note: Portraits of Resilience is a photography and narrative series by Prof. Daniel Jackson. Each installment consists of a portrait and a story, told in the subject's own words, of how they found resilience and meaning in their life.

I had started the second semester of my sophomore year, and it was going fine. I had all of the test dates in my calendar. Then on February 22, 2014, I was running with a friend and I had a cardiac arrest. Bystanders

It took them six minutes to get there. Nobody did CPR on the scene, which would have made a huge difference. It took eighteen minutes of CPR for my heart to start beating on its own. I've heard the brain can actually survive four minutes without oxygen, so any kind of CPR would have really been useful. That's why I'm a big advocate

I was ambulanced to MGH. My Glasgow Coma Scale was three, which is the lowest possible. It's based on basic signs of consciousness, like whether or not your pupils dilate when they shine light in your eyes. Because of that, I was eligible for this experimental procedure where they cool your body down. They took an MRI that day and it was normal, because the damage had not hit yet. Then they took it after the cooling procedure, and there was extensive damage in the basal ganglia and the occipital lobe. The damage to the occipital lobe makes it difficult for me to read, even today.

I was at MGH for five weeks. I don't remember that period at all. Apparently I was what they call "storming," which means my eyes were open, and I was flailing my arms and legs around. My prognosis was Persistent Vegetative State. Doctors like to give you medication to try to stop the storming, but my dad disagrees with all of that. He found the best way to calm me down was to give me massages and play music to me.

They transferred me to Craig Hospital in Colorado. Craig was really an amazing place. That was when I became aware. The sense of loss had not hit me yet. I was kind of just, like, "Okay, this is what I have to deal with."

Craig is a rehab hospital. There are three major disciplines - speech, physical, and occupational - and I experienced them in that order. At first, I would stick out my tongue for "yes" and close my eyes for "no." I wasn't able to move my arms at all or my legs at all. I remember my face used to itch so much. I would close my eyes and say, "You know, if you tell yourself it doesn't itch, it will stop itching." Vision fell under occupational therapy. I described it as rain falling on your car window - things were blurry

When I first started eating, I didn't like it.

I thought, "Just keep going with the G-tube. I'm fine with that," because it was a lot of work to chew. My big goal after I got to talk and eat was to walk. I incorrectly believed that if I could only walk, everything would be better. I remember when I first stood on my legs for the first time, my hamstrings hurt higher-ups was an MIT alum. I think she pulled some strings. I went to Rancho twice a week for two and a half months.

By September, I could walk and I could go to the bathroom by myself, which was a big deal. I wanted to move along faster, so I made the decision to stop going to Rancho



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FLOAT ON TO A NEW ADVENTURE

so bad. My goal was to walk out of Craig, but when I left, I needed a walker and my physical therapist to help me.

I went back to L.A. where I'm from. At first I went to Rancho Los Amigos, which is really well-known in the business. The problem is that the wait lines are forever - it's like going to the post office. One of the reasons I got in so quickly was that one of the and start going to this other place called CNS, the Center for Neuro Skills. CNS was for-profit, so that's kind of iffy. Less quality but more quantity. I went there for five days a week, six hours a day.

Then I started at Santa Monica College. They have a brain injury program, and they're very good with the accommodations. I took two classes. One of the classes was training me on technology. I have a program on my computer that reads to me. The other one was kind of a joke class. It was very easy, but in the beginning it was good just to have to go there on my own, sit in class, and do these things independently.

I came back to MIT last fall. Living on my own was a big adjustment. I do need help still, but my roommate helps out a lot. In the bathroom, I have squeeze bottles for shampoo and soap, and she refills them for me.

Last semester, I started with two courses and I had to drop one. Two was a heavy load, but one was a little bit too light. I'm also going to occupational and physical therapy. I don't go to speech therapy anymore. I still have dysarthria, but it will get better with practice. I do that everyday, all the time.

My vision used to be a really big, sensitive issue for me. I knew my motor skills were going to improve, but the vision, I didn't know. Now it's improved so much, so it's not a

I've put all my aspirations on hold. I prioritize a lot, so I had to walk, and then I had to feed myself, and then dress myself. I cry a lot when I get frustrated. Usually it's something a ten-year-old or even a five-year-old could do. If I go to a dinner, I'm thinking "Is it going to be an issue?" I cannot really cut meat yet. So I get upset but I think it's justifiable, and I don't stay upset.

It's hard to make new friends. Partly, it's that I feel I cannot make any kind of relationship with a person if they don't know this about me. It's a big part of my life, especially right now. Maybe in ten years it will be a side

I've not really looked ahead too far because I'm so focused on getting through each day. I want to finish the semester with two classes and hopefully get an acceptable grade in both. I think that will be a really big accomplishment.

Life gets better if you work at it. If you don't, if you sit on the couch all day, it doesn't get better. But if you work hard, you can make anything happen.

Taylor Shaw is member of the Class of

This project is supported by the Undergraduate Association's Committee on Student Support and Wellness, chaired by Tamar Weseley '17 and Alice Zielinski '16. To participate in the project, or to learn more, contact ResilienceProject@mit.edu.

There are many ways to find help. Members of the MIT community can access support resources at together.mit.edu. To access support through MIT Medical's Mental $Health\ \&\ Counseling\ Service,\ please\ call\ (617)$ 253-2916 or visit medical.mit.edu.

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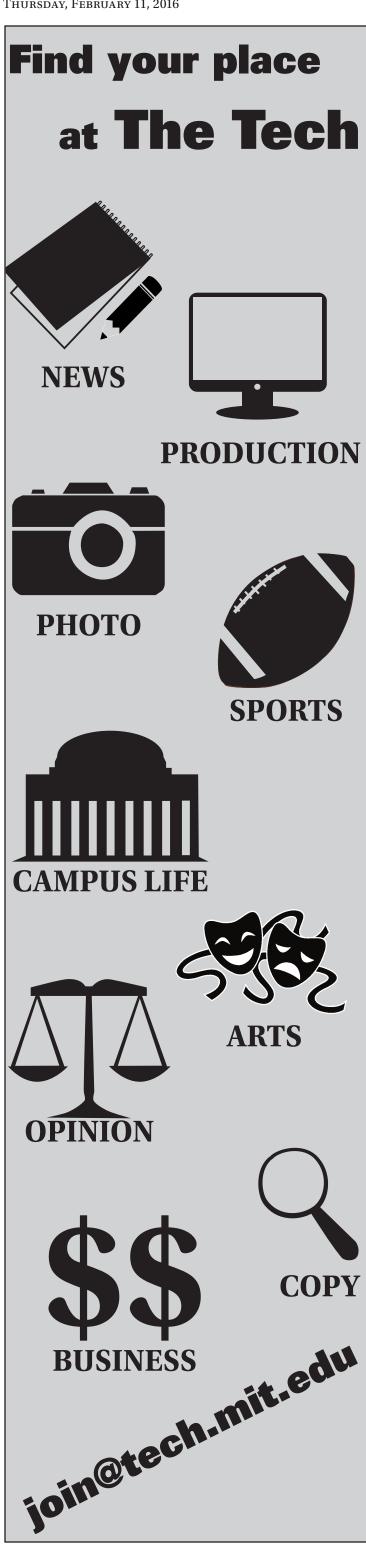






Thursday, February 11, 2016

The Tech 13



Departments, key to the BSU's proposal, have not yet shown support, working group says

MIT initiatives have set precedents in correcting bias

BSU, from Page 1

ply specifically to DLCs (Departments, Laboratories, and Centers). One calls for "a formal statement from the leader ... affirming MIT's commitment to students' health, diversity, and inclusion."

This recommendation asks that each DLC head release a statement that mental and physical health is considered more important than quality of work; that diversity in and inclusion of students, faculty, and staff is valuable; and (for departments) that they commit to MIT's goal of doubling underrepresented minority (URM) faculty and tripling the percentage of URM graduate students within their department.

The other recommendation calls for the "creation of a diversity representative within each department." The representatives "must have experience with and educational background specifically in diversity and URM recruitment and retention in higher education," and will develop and execute plans to meet the diversity goals.

The working group faces challenges in implementing DLC-specific challenges. Senior leadership is ready to pursue these recommendations, as evidenced by the fact that a working group has already been created. Despite this, most DLCs have not shown support.

Institute Community and Equity

Officer Edmund Bertschinger believes that DLC reluctance to support the recommendations comes from the fact that many faculty "don't know how to have conversations about topics outside the classroom." Faculty don't realize that their students would appreciate discussions beyond academics, according to Bertschinger.

MIT Vice President Kirk Kolenbrander said there needs to be "a process that allows DLCs to feel engaged." He said he understands why the recommendations ask every DLC to make the same statement and set the same goals, but feels that DLCs should collaborate with students and the working group to write a statement rather than be told exactly what to say.

Students put forth the recommendations, but they consist of administrative changes that would require senior leadership and faculty to take action. This presents another challenge: because students want to ensure that progress is being made, they want to hold specific people accountable. Vice President Kirk Kolenbrander considers current accountability measures to be inadequate — "otherwise we wouldn't be seeing [calls for accountability] in the recommendations," he said.

One option is to make sure that every student group involved in the recommendations has a point person in the administration to bring concerns to. Kolenbrander considers this an "aspirational goal."

MIT also has a history of setting precedents in efforts to correct bias and inequality in the community. In 1999, the faculty newsletter published an article titled "A Study on the Status of Women Faculty in Science at MIT" acknowledging and detailing discrimination and gender bias that senior women faced. As a result, a flood of women facing similar discrimination submitted their stories to the newsletter, and many institutions reviewed their own practices.

The same was seen with MIT's 2014 Community Attitudes on Sexual Assault and 2015 Healthy Minds surveys, which Bertschinger considers "humble self study." Both inspired other institutions to conduct similar studies.

This project must also have a strong public presence, according to Bertschinger. MIT needs to "educate people not only about STEM but also about the importance of mental wellbeing and diversity and inclusion," he said. The efforts made here are especially relevant given that similar recommendations have recently been made at many schools.

The working group met with BSU and BGSA representatives on Dec. 1. It has had three meetings so far, and a fourth is upcoming.

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Thursday, February 11, 2016

Once a scientific curiosity, Zika first emerged in force on a remote island in the Western Pacific

Until 2007 there had been only 14 confirmed cases, and no recorded outbreaks, of Zika

By Austin Ramzy

THE NEW YORK TIME

HONG KONG — Yap Island, a tiny island in the Western Pacific best known for using huge stone discs as currency, was facing a medical mystery.

In 2007, doctors saw an alarming increase in the number of patients with rashes, inflamed eyes and joint pain. Initial tests provided no answers to what was making them sick.

"We didn't have any idea what it might be," said Lt. Col. Mark Duffy, a U.S. Air Force public health officer assigned to work on the unknown ailment for the Centers for Disease Control and Prevention's epidemic intelligence service. "There was some thought it might be a dengue outbreak."

Dengue is a potentially deadly mosquito-borne disease that affects as many as 100 million people around the world each year. Chikungunya, another virus spread by mosquitoes, was also considered.

But patients' blood samples tested by a CDC lab in Fort Collins, Colorado, confirmed that the doctors were seeing something novel: It was the world's first significant Zika outbreak.

For most of its known existence, Zika was little more than a scientific curiosity. After its discovery in 1947, in the forest in Uganda that gave the virus its name, it spread slowly across Africa and Asia. Blood tests have found Zika antibodies in people in India, Pakistan, Malaysia, Vietnam, the Philippines, Thailand and Indonesia — evidence that

they had been exposed to the virus. Even so, few cases of the illness had been reported.

For more than half a century there were no confirmed outbreaks of Zika, and only 14 confirmed human cases.

Then, in 2007, Zika appeared on Yap and nearby islands in Micronesia, 800 miles east of the Philippines, where nearly 50 people had been infected. Six years later, it showed up in French Polynesia, 5,000 miles to the southeast of Yap, where thousands contracted the virus.

Zika has now infected an estimated 1.5 million people in Brazil and is rapidly spreading through many parts of the Americas. The newest outbreak has researchers examining its trail across Asia and the Pacific, trying to learn more about the first outbreaks of the disease and why it appears to have gotten so much worse.

"Something very, very different is going on there," said Duncan Smith, an infectious diseases researcher at Mahidol University in Thailand. "We don't know what it is at the moment."

For much of its history, Zika was subject to little research. Just 1 in 5 people who were infected developed symptoms, and they were usually mild and often mistaken for other illnesses.

"There were these odd cases popping up from time to time," Smith said. "There is so much dengue in this area, and the symptoms of dengue and Zika are quite similar — rash, fever, muscle aches and pains. I wonder if cases of Zika have

been occurring but misclassified in the region."

Why the disease appears to have been milder in Asia is unclear. Smith said that aggressive campaigns to vaccinate for Japanese encephalitis, a virus found in Asia and the Western Pacific, may have had an effect on Zika, but that premise had yet to be investigated.

"Maybe it has become much more aggressive, with a more severe presentation and transmission as a result of it going across the Pacific," he said. "We won't know until a lot more work has been done."

Doctors in Yap soon knew they were facing something different. No deaths or hospitalizations had been reported but 49 confirmed cases and 59 probable cases were identified, far more than ever before.

Exactly how the virus got to the remote archipelago is still unclear, though an infected mosquito or person is the most likely culprit. Duffy noted in a paper for The New England Journal of Medicine in 2009 that a medical volunteer on Yap returned to the United States in July 2007 and tested positive for Zika antibodies, indicating a likely infection.

Air travel and the abundance of mosquitoes in the Pacific region "raise concern for the spread of Zika virus to other islands in Oceania and even to the Americas," the paper said.

"As an epidemiologist, when you start making predictions about how some of these things are going to behave, they're going to make you look silly every time," Duffy said. "But simply raising concern that there is a potential for it to occur eventually, we felt that was a solid statement that we could stand behind."

When Zika appeared in French Polynesia in 2013, the outbreak on Yap had helped health officials prepare. Labs in the far-flung area had developed methods to test for Zika to help out other Pacific nations, said Van-Mai Cao-Lormeau, an infectious diseases researcher at Institut Louis Malardé on Tahiti, the largest island in French Polynesia.

"This is a small country," Cao-Lormeau said. "Everyone who worked in the lab had relatives or friends who had seen something that looked like dengue. We had more and more cases."

The outbreak in French Polynesia was explosive: An estimated 28,000 people, more than 10 percent of the territory's population, sought treatment. And the potential side effects were more severe than any that had been seen before.

The incidence of Guillain-Barré syndrome, a disease that causes the immune system to attack the nervous system, sometimes causing paralysis, was 20 times higher than what would be normally expected, Cao-Lormeau and colleagues wrote in a 2014 edition of the journal Clinical Microbiology and Infection.

After cases of microcephaly, infants born with abnormally small heads, appeared in Brazil, researchers in French Polynesia did a retrospective investigation of women who were pregnant during the outbreak. They found 17 cases

of children with neurological conditions, including microcephaly, Cao-Lormeau said.

Links between the Zika virus and microcephaly and Guillain-Barré have not been confirmed and are still being studied.

Small outbreaks in New Caledonia, the Cook Islands and Easter Island were reported after the French Polynesia outbreak, and Zika has probably spread even more widely in the Pacific without being detected, Cao-Lormeau and colleagues wrote.

Researchers are not certain why the virus seems to be more aggressive in the Americas than in Yap or French Polynesia. One potential factor is the islands' comparatively small populations, Cao-Lormeau said.

"We are just 270,000 people," she said. "Because we are small, maybe we won't see as much adverse effects."

The other possibility researchers are considering: The virus has mutated and gotten worse.

MIT Medical has made Zika virus tests available to certain community members who have recently returned from an area affected by the virus, according to an email.

Only travelers who are exhibiting symptoms, have Guillain-Barré syndrome, or are pregnant are elligible for testing.

"As testing becomes more widely available, this will change," the email said.



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Thursday, February 11, 2016

The Tech 15

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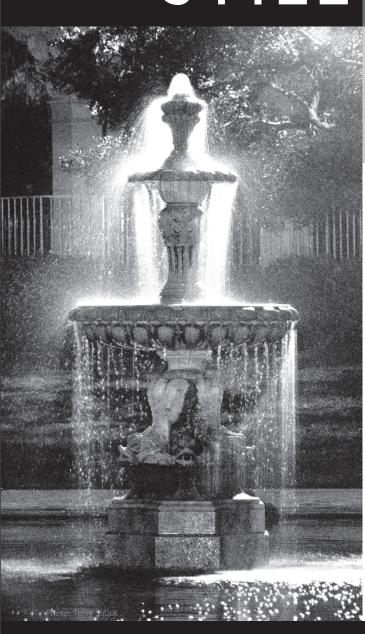
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IT'S ON

Men's basketball wins NEWMAC in overtime, defeating Coast Guard 74-67 In the final two minutes, MIT came from behind to send the game

into overtime; missed shots by Coast Guard let team take the lead

By Phil Hess DAPER STAFF

MIT overcame a nine-point deficit in the final 1:48 of regulation to send its New England Women's and Men's Athletic Conference (NEWMAC) men's basketball game to overtime where the Engineers gained the upper hand to come away with a 74-67 victory. Bradley Jomard '19 scored 13 of his season-high 29 points over the final six minutes,

including overtime, to help the

Engineers secure the win. Coast Guard (9-11, 3-7 NEW-MAC) looked to be in control when a pair of free throws by sophomore Ethan Boose gave the Bears a 57-48 lead with 1:48 left. MIT (16-4, 8-2 NEWMAC) started its comeback when Justin Pedley '16 answered with a three to make it a six-point game. After a Coast Guard free throw, Pedley drained another three to make it a four-point gap. Poor free throw shooting by the Bears, who hit 2-of-7 in the final minute and a half, allowed the Engineers to close in and when Jomard was

fouled with 23 ticks left he stepped to the line and sank both shots to tie it at 59-all and send it to OT.

In the extra time, the two sides traded a pair of points in the first minute before Jomard hit on a layup and then a pair of free throws to put MIT up 64-61 with 3:30 left, its first lead

since the seven-minute mark of the second half. The Engineers never trailed again, as they sank 9-of-11 free throws in the final minute to ice the win.

MIT had the upper hand early in the contest, going out to a 13-6 lead after a three from

Ryan Frankel '16 and a jumper from Jomard. Coast Guard slowly chipped away and eventually

> with six minutes left in the half when sophomore Darius Adams scored on a layup. It was never more than a two-point game for the rest of the half, and sophomore Micah Baldez hit a shot for the Bears as time expired to make it a 27-27 game.

caught

It was still a tied game two minutes into the second half, but MIT came up with threes from Cameron Korb '19, Pedley, and Jomard to open a 41-32 advantage with 14:39 left. The lead grew to 44-34 after a basket from Lampros Tsontzos '16, but MIT then went eight minutes without scoring, missing on 10 straight attempts.

That was the opening that Coast Guard needed and the Bears reeled off 14 unanswered points, six on a pair of threes by Baldez, to go on top 48-44 with six minutes to go. A Jomard jumper halted the MIT scoring drought, but Coast Guard came back with seven consecutive points, taking a 55-46 lead on a three-pointer by junior Adrian Chuquillangui with three minutes to go. The Bears missed two more three attempts, however, and the Engineers went on to stage the comeback that led to their win.

Jomard hit all nine of his free throw attempts and completed a double-double with a team-high 10 rebounds for MIT. Pedley hit on five long-range shots on his way to a 16-point outing, with Frankel adding nine points and six assists and Korb a season best nine points.

SPORTS SHORT

Men's volleyball won in straight sets against Emerson to reach 10-3 on the season. Martin Krasuski '17 and Matt Riley '19 had 15 and 12 kills respectively.

Women'sbasketball notched a blowout victory over Simmons, 72-40. Sabrina Drammis '16 led the Engineers with 20 points.

Men's basketball won an overtime duel against Coast Guard, 74-67. Bradley Jomard '19 led the team in both points and rebounds with 29 and 10 respectively.

MIT rifle racked up three of four team wins at the annual Beanpot. Sarah Wright '16 won four individual events.

Track and Field team member Maryann Gong '17 ran an NCAA best time for the third straight week. Following her recordbreaking efforts in the 3000m and 5000m, Gong completed the one-mile race in 4:52:57.

— Souparno Ghosh

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